



**Matthew Rodriguez**  
Secretary for  
Environmental Protection



## Department of Toxic Substances Control

**Deborah O. Raphael, Director**  
5796 Corporate Avenue  
Cypress, California 90630



**Edmund G. Brown Jr.**  
Governor

July 2, 2013

**Mr. Michael Evans**  
Associated Plating Co., Inc.  
9636 Ann Street  
Santa Fe Springs, California 90670  
(m.evans@associatedplating.com)

**REVIEW OF TOTAL PETROLEUM HYDROCARBONS (TPH) AND ARSENIC DATA,  
ASSOCIATED PLATING COMPANY, 9636 ANN STREET, SANTA FE SPRINGS, LOS  
ANGELES COUNTY (SITE CODE: 400891)**

Dear Mr. Evans:

The Department of Toxic Substances Control (DTSC) reviewed the total petroleum hydrocarbons (TPH) and arsenic (As) data and justification letter, dated February 18, 2013, and review of Site plan and soil volatile organic compounds (VOCs) results (received on February 28, 2013), for Associated Plating Company (APC).

The 1.25-acre APC (Site) consists of an approximately 17,000 square foot plating facility. The plating facility specializes in the use of fused tin and tin/lead alloys using electro and electroless plating. The Site contains two hazardous waste units authorized by DTSC on August 4, 1993 under Permit by Rule.

On December 31, 1996, pursuant to Health and Safety Code section 25200.14, APC submitted a Phase I Environmental Assessment and Limited Environmental Compliance Assessment to DTSC. On March 9, 2001, DTSC identified five solid waste management units that required further investigation. Based on subsequent investigations in November 2001 and February 2002, DTSC and APC entered into a Corrective Action Consent Agreement on January 5, 2004. The Site was subsequently separated into three operable units (OUs): OU1 consisted of soils above a buried concrete pad at 7 feet (ft) below ground surface (bgs); OU2 consisted of soils and the first groundwater zone from 7 to 70 ft bgs; and OU3 consisted of off-site soils and the groundwater zone.

Mr. Michael Evans  
July 2, 2013  
Page 2

In January 2005, APC submitted a Facilities Investigation Report for OU1 (FI-OU1) documenting soil and soil gas sampling results per a DTSC-approved Facilities Investigation Workplan. On June 28, 2005, DTSC approved the revised FI-OU1 Report and requested a workplan for OU2. On February 27, 2006, DTSC approved the January 2006 revised FI Workplan for OU2. APC submitted an FI Report for OU2 dated June 30, 2006. DTSC approved the FI-OU2 Report on June 27, 2007. During this time, APC submitted a draft Corrective Measures Proposal (CMP) for DTSC review on February 2, 2007. DTSC issued comments on the CMP on April 30, 2007 and September 25, 2009.

DTSC has identified discrepancies in the data provided and requires clarification or modification. The enclosed comments identify these discrepancies. Please submit a table with response to the enclosed comments and revised document by July 31, 2013. The table should restate each comment, provide the associated response, and cross reference response to revised PEA.

If you have any questions, please contact me at (714)484-5308 or at email address [ashareef@dtsc.ca.gov](mailto:ashareef@dtsc.ca.gov).

Sincerely,



Aslam Shareef  
Project Manager  
Schools Unit—Cypress Office  
Brownfields and Environmental Restoration Program

ed/as/sh

Enclosure

cc: Mr. Janaka Jayamaha  
[Janaka.Jayamaha@WorleyParsons.com](mailto:Janaka.Jayamaha@WorleyParsons.com)

**DTSC COMMENTS**  
**REVIEW OF TOTAL PETROLEUM HYDROCARBONS (TPH) AND ARSENIC DATA**  
**ASSOCIATED PLATING COMPANY**  
**SANTA FE SPRINGS**

**Jose Marcos**

Engineering Geologist  
DTSC-Cypress  
(714) 484-5492  
[JMarcos@dtsc.ca.gov](mailto:JMarcos@dtsc.ca.gov)

1. Perform additional site characterization to define the vertical extent of contamination. USEPA RSLs for direct contact exposure are not applicable for evaluating the threat to groundwater and should therefore not be used as screening levels for the deep soil investigation. Characterize to non-detect if possible. The USEPA RSLs, specifically the SSL (soil screening level) column is for evaluating threat to groundwater and may be utilized as a screening level. Alternatively, site specific SSLs can be calculated. Areas to investigate include areas that have known shallow soil contamination, areas that show a trend of VOC detections in the shallow-intermediate soil depths, and any new areas where releases may have occurred since the last shallow soil/soil vapor sampling. Historically, there were several areas towards the southwest and west of the site that may fit these descriptions. DTSC understands that there have been historic access restrictions at the site, and it is not known if these restrictions still exist. The facility should evaluate data gaps and propose areas that should be investigated for vertical characterization.
2. Evaluate the threat of soil contamination leaching to groundwater. In the area of MW-4, high levels of VOCs exist throughout the soil column (4,200 ug/kg PCE at 10 feet, 6,700 at 15 feet and 720 ug/kg at 35 feet bgs; historic groundwater level was at approximately 34-38 feet) and VOCs are also in groundwater, which is indicative that VOCs have likely migrated to groundwater from the site. In the evaluation of threat to groundwater from vadose zone leaching, please perform additional vertical characterization to determine if similar conditions described above (MW-4) exist, to better understand the extent and mass of VOCs in the vadose zone that may continue to leach into groundwater. After collection of the deeper soil data, the facility should perform an evaluation to determine if the existing contaminant mass in the vadose zone will continue to leach into groundwater, and if so, remedial measures may be warranted.
3. Due to the existing groundwater contamination at the site, groundwater monitoring and investigation should be performed and the path forward should be evaluated to address groundwater contamination as the project progresses.

**Cy Jeng**  
Staff Toxicologist  
DSTC-Cypress  
(714) 484-5359  
[CJeng@dtsc.ca.gov](mailto:CJeng@dtsc.ca.gov)

Comments on the 2/18/13 letter prepared by Worley Parsons regarding TPH and Arsenics in Soils:

1. Page 3: HERO recommends the use of 95% upper confidence limit (UCL) on the mean instead of the arithmetic mean concentration to estimate "central tendency" exposure dose for workers.
2. Page 4: The indoor air concentrations of TPH were calculated incorrectly, and thus the risk estimates for commercial workers may be under-estimated (note that the indoor air inhalation pathway is not applicable to construction workers). HERO notes that the indoor air concentrations on Table 3 were calculated by multiplying the outdoor air concentrations with an attenuation factor of 0.001. However, this attenuation factor is intended for transport from soil gas or groundwater to indoor air, not from outdoor air to indoor air. To estimate the indoor air inhalation dose and risk, HERO recommends using available soil gas data for TPH and a default attenuation factor of 0.001 for soil gas. Alternatively, a site-specific attenuation factor for soil gas can be derived using the Johnson & Ettinger model in accordance with the latest DTSC Vapor Intrusion Guidance (2011).
3. Page 5: For arsenic, the comparison of the mean concentrations with the background level of 12mg/kg is not appropriate as the latter is an upper tolerance limit, i.e., a high-end value of the background data set. HERO recommends performing a graphic and statistical evaluation of on-site arsenic data in accordance with DTSC's guidance on Ambient Concentrations of Metals (1997) and Arsenic Strategies (2009). Furthermore, a statistical comparison of arsenic concentrations in fill materials and those in native soil may be performed to support the statement regarding arsenic attributable to natural background conditions at the site.
4. Table 1: Please include the total sample count for each constituent of concern on the table. It is not clear how the terms "95% UCL of the Mean" and "Mean plus 95% UCL" were derived on Table 1. HERO recommends using USEPA software ProUCL (<http://www.epa.gov/osp/hstl/tsc/software.htm>) to calculate data statistics. Outputs from the USEPA software should be included as an attachment to the letter for completeness.

5. Table 4: Please include details on how the toxicity reference values for various TPH fractions on Table 4 were estimated. Specifically, please list the toxicity values and compositions of aliphatics and aromatics for TPHg, TPHd, and TPHr used in the estimation.

In summary, the letter should be revised to address the above comments. Provided that the revised results do not change the findings, HERO would agree with elimination of TPH and arsenic as a constituent of concern for further evaluation. In addition, HERO supports the use of administrative and engineering controls to mitigate exposure of construction workers to TPH and arsenic during future work on the site (Page 6). The exposure control should be included as part of the final remedy in a site closure document (e.g., soil management plan).

Please address the above comments in the future deliverable. Please feel free to contact me if you have any questions.